

- THOMSON, J. J. Recent Researches in Electricity and Magnetism, Sections 369-379.
- TYNDALL. On Light, pp. 152-162.
- SMITH. Optics, II, Remark 378.
- (D) *Miscellaneous Histories:*
Other references, interesting mainly from the historical point of view, and which I have been personally unable to consult, are:
 LEONARDO DA VINCI. Tratto della pittura.
 GOTHE. Farbenlehre, I, p. 59.
 MELVILLE. Edinb. Phys. and Lit. Essays, pp. 81-89, 1770.
 HONORATUS FABRI. Optical Essays.
 BOUGUER. Traité d'Optique, pp. 365-368.
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 BREWSTER. Treatise on New Philosophical Instruments. Edinb., 1813, p. 349.
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MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Manuel E. Pastrana, Director of the Central Meteorologic-Magnetic Observatory the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the Boletín Mensual. An abstract, translated into English measures, is here given, in continuation of the similar tables published in the MONTHLY WEATHER REVIEW since 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published on our Chart IV.

Mexican data for September, 1900.

Stations.	Altitude.	Mean barometer.	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
Durango (Seminario).	6,245	24.07	87.8	50.0	64.4	60	4.30	ene.	se.
Leon (Guanajuato)...	5,984	24.33	82.6	53.4	67.5	67	2.23	sse.	e.
Mazatlan	25	29.88	92.8	72.7	83.3	80	14.18	nw.	se.
Merida	50	29.99	95.0	78.8	81.5	80	1.50	ne.	e.
Mexico (Obs. Cent.)	7,472	23.08	77.0	50.0	62.8	68	2.51	n.	ne.
Morelia (Seminario)...	6,401	23.99	78.8	51.8	63.9	80	3.22	e.	e.
Puebla (Col. Cat.)...	7,112	23.37	77.0	51.8	65.7	81	8.09	e.	sw.
Saltillo (Col. S. Juan)...	5,899	24.83	83.3	56.1	69.6	78	4.46	n.	s.

RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

- National Geographic Magazine. Washington. Vol. 2.
 Garriot, E. B. West Indian Hurricane, September 1-12, 1900. P. 384.
- Nature. London. Vol. 62.
 Marshall, A. Atmospheric Electricity and Dew-point. P. 495.
- La Géographie. Paris. Année 1900.
 Engel. Le climat de la Suède, d'après Ekholm. P. 199.
- Science. New York. Vol. 12.
 Fergusson, S. P. Progress in Meteorological Kite Flying. P. 521.
- Philosophical Magazine. London. Vol. 50.
 Barnard, R. J. A. Annual March of Temperature. P. 408.
- Geographical Journal. London. Vol. 16.
 Borchgrevink, C. E. The "Southern Cross" Expedition to the Antarctic. 1899-1900. P. 381.
- Das Wetter. Berlin. 17 Jahrg.
 Brückner, E. Ueber den Einfluss der Schneedecke auf das Klima der Alpen. P. 193.
- Schubert, J. Der Einfluss der Wälder auf das Klima. P. 209.
- Comptes Rendus. Paris. Tome 131.
 Mathias, E. Sur la distribution de la composante horizontale du magnétisme terrestre en France. P. 554.
- Comptes Rendus. Paris. Tome 131.
 Guarini et Poncelet. Télégraphie sans fil avec répétiteurs. Inconvénients des relais successifs Guarini. P. 581.
- Nederlandsch Tijdschrift voor Meteorologie. Groningen. 1 Jahrg.
 Kiehl, A. H. Poollicht. P. 49.
- Buijsman. Het klimaat en de planetengroei van Canada. P. 51.
- Mieden van Opmeer, J. P. F. van der. Het Ontstaan van Onwedges. P. 57.
- Scientific American Supplement. New York.
 Cline, I. M. Special Report on the Galveston Hurricane of September 8, 1900. P. 20756.
- Meteorologische Zeitschrift. Wien. Band 17.
 Kremster, V. Klimatische Verhältnisse des Memel-, Pregel- und Weichsel-Gebietes. P. 337.
- Muttrich, —. Ueber den Einfluss des Waldes auf die Lufttemperatur nach den in Eberswalde an verschiedenen aufgestellten Thermometern gemachten Beobachtungen. P. 356.
- Rudel, K. Zur Frage des Auftretens der Eismänner in Bayern. P. 373.
 — Resultate der meteorologischen Beobachtungen in Punta Arenas. P. 375.
- Bornstein, R. Gewitterbeobachtungen bei einer Ballonfahrt. P. 377.
- Ihne, —. Ueber Abhängigkeit des Frühlingseintritts von der geographischen Breite in Deutschland. P. 378.
- Mac Dowall, —. Ueber die Frage einer 10 jährigen Wetterperiode. P. 381.
- P. H. Ueber den Kugelblitz. P. 382.
- Pernter, J. M., und Trabert, W. Untersuchungen über das schiessen. P. 385.
- Völle, J. Aktinometer-Beobachtungen während der Sonnenfinsterniss vom 28 Mai 1900. P. 415.
- Krammer, H. Hagelkörner von eigenthümlicher Form. P. 417.
- Maier, M. Temperaturbeobachtungen bei der am 28 Mai 1900 stattgefundenen Sonnenfinsterniss. P. 417.
- Rudolph, H. Die Entstehung der Sonnenflecken. P. 418.
 — Klima der Schneekoppe. P. 419.
- Bauernberger, H. Leuchtende Nachtwolken? P. 419.
- Bornstein, R. Gibt es eine Beziehung zwischen Luftdruckvertheilung und Monddeklination? P. 420.
- Taudin-Chabot, J. J. Drei Beobachtungen über die Plasticität des Eises. P. 425.
- Taudin-Chabot, J. J. Grünstrahlung. P. 426.
 — Grüner Strahl beim Venus-Untergang. P. 426.
- Geitel, H. Eine Vorrichtung zur Demonstration von Luftwogen. P. 426.
 — Änderung des Erdmagnetismus mit der Höhe. P. 427.

OBSERVATIONS FOR LOCAL THUNDERSTORMS AT SKYLAND, PAGE COUNTY, VA., SEPTEMBER, 1900.

By Messrs. W. H. and H. S. CRAGIN.

- September 1.—8 a. m., 70°; 3 p. m., 81°; 9 p. m., 70°. Fair and slightly warmer, with light east winds.
- September 2.—8 a. m., 70°; 3 p. m., 78°; 8 p. m., 67°. Fair and not so warm; light east winds, becoming high at night.
- September 3.—8 a. m., 67°; 1 p. m., 76°; 8 p. m., 70°. Partly cloudy, with light east winds, becoming northwest at night. There was a little rain early in the morning of the 4th.

September 4.—8 a. m., 64°; 1 p. m., 76°; 8 p. m., 67°. Fair, with fresh northwest winds.

September 5.—8 a. m., 69°; 1 p. m., 76°; 8 p. m., 71°. Generally fair, with fresh to light south winds.

September 6.—8 a. m., 67°; 3 p. m., 84°; 11 p. m., 71°. Fair and warmer; west winds.

September 7.—8 a. m., 70°; 2 p. m., 82°; 11 p. m., 69°. Partly cloudy; continued warm, with fresh east winds. Between 4 and 6 p. m. several light showers occurred in the Shenandoah Valley. The area of precipitation extended from a few miles to the north of the gap nearly to Riverton. There was practically no movement to the storm.

September 8.—8 a. m., 72°; 2 p. m., 81°; 11 p. m., 74°. Partly cloudy and warm; fresh east winds. Between 12 a. m. and 2 p. m. a general showery formation appeared to the west of here in the neighborhood of Newmarket Gap. The stormy formation disappeared without moving. Some little rain fell.

September 9.—8 a. m., 74°; 2 p. m., 82°; 8 p. m., 70°. Partly cloudy, continued warm; light south to east winds. Between 2 and 3 p. m. a light shower, with but little thunder, formed in the neighborhood of the gap, and moved east by northeast, crossing the ridge to the north of here—the extreme southern edge passing over camp a little after 3 p. m.

September 10.—8 a. m., 71°; 2 p. m., 83°; 1 p. m., 68°. Fair in morning; partly cloudy, with showers in afternoon. Between 5 and 6 p. m. a few showers occurred in the Shenandoah Valley. From 7 to 10 p. m. a little rain fell in camp.

September 11.—8 a. m., 74°; 2 p. m., 86°; 11 p. m., 73°. Fair, with fresh south winds. During the night west winds increased, reaching gale force by morning.

September 12.—8 a. m., 72°; 2 p. m., 75°; 11 p. m., 64°. Fair, with west gales, diminishing in force during the day. On the morning of the 7th indications were first noticed of an approaching northeast storm. Unsettled weather continued until the night of the 11th. The west gale which came on during the night of the 11th broke the longest spell of hot weather on record for this place.

September 13.—8 a. m., 64°; 2 p. m., 77°; 8 p. m., 68°. Fair, with light winds, mostly easterly. There were indications of a coming storm at night.

September 14.—8 a. m., 65°; 2 p. m., 68°; 9 p. m., 62°. Generally cloudy, with northeast winds.

September 15.—8 a. m., 60°; 2 p. m., 62°; 9 p. m., 60°. Rain and fog, with northeast winds. The rain was quite heavy during the afternoon and evening. It stopped at midnight. High northeast winds prevailed during the morning, but diminished rapidly between 12 m. and 1 p. m., and were only fresh during the afternoon. They shifted to south then to southwest between 6 and 9 p. m.

September 16.—8 a. m., 62°; 2 p. m., 70°; 10 p. m., 58°. Fair, with brisk winds; westerly shifting to northwest winds, and increased during the night, with a cool wave.

September 17.—8 a. m., 48°; 2 p. m., 54°; 10 p. m., 48°. Fair, with brisk to high northwest winds.

September 18.—8 a. m., 44°; 2 p. m., 55°; 9 p. m., 50°. Fair, with brisk northwest winds diminishing.

September 19.—8 a. m., 40°; 2 p. m., 58°; 10 p. m., 50°. Fair, with light north shifting to southeast winds in the afternoon, and becoming brisk at night.

September 20.—8 a. m., 56°; 2 p. m., 64°; 10 p. m., 60°. Partly cloudy, with southwest becoming brisk southeast winds at night. A little rain fell during the night.

September 21.—8 a. m., 58°; 2 p. m., 65°; 10 p. m., 60°. Generally cloudy, with light winds becoming southeast at night.

September 22.—8 a. m., 58°; 2 p. m., 63°; 10 p. m., 58°. Partly cloudy, with southwest winds.

September 23.—8 a. m., 52°; 2 p. m., 60°; 9 p. m., 56°. Rain in morning, generally fair in afternoon, southwest winds.

September 24.—8 a. m., 54°; 2 p. m., 65°; 8 p. m., 58°. Fair, with light southwest winds.

September 25.—8 a. m., 58°; 2 p. m., 69°; 10 p. m., 60°. Fair; light southwest winds.

Light frost was noticed by others on the morning of the 19th.

OBSERVATIONS AT HONOLULU.

Through the kind cooperation of Mr. Curtis J. Lyons, Meteorologist to the Government Survey, the monthly report of meteorological conditions at Honolulu is now made partly in accordance with the new form, No. 1040, and the arrangement of the columns, therefore, differs from those previously published.

Meteorological observations at Honolulu, September, 1900.

The station is at 21° 18' N., 157° 50' W.

Hawaiian standard time is 10° 30' slow of Greenwich time. Honolulu local mean time is 10° 31' slow of Greenwich.

Pressure is corrected for temperature and reduced to sea level, and the gravity correction, -0.06, has been applied.

The average direction and force of the wind and the average cloudiness for the whole day are given unless they have varied more than usual, in which case the extremes are given. The scale of wind force is 0 to 12, or Beaufort scale. Two directions of wind, or values of wind force or amounts of cloudiness, connected by a dash, indicate change from one to the other.

The rainfall for twenty-four hours is measured at 9 a. m. local or 7:31 p. m., Greenwich time, on the respective dates.

The rain gage, 8 inches in diameter, is 1 foot above ground. Thermometer, 9 feet above ground. Ground is 43 feet, and the barometer 50 feet above sea level.

Date.	Pressure at sea level.	During twenty-four hours preceding 1 p. m. Greenwich time, or 2:30 a. m. Honolulu time.						Total rainfall at 9 a. m., local time.			
		Dry bulb.	Wet bulb.	Temperature.	Temperature.	Means.	Wind.				
		Maximum.	Minimum.	Dew-point.	Relative humidity.	Precipitating direction.	Force.	Average cloudiness.	Sea-level pressures.	Maximum.	Minimum.
1	•	76	70	86	73	67.7	68	ne.	\$	2-5	29.97
2	29.93	76	70.5	85	75	66.5	65	ne.	3	2	29.92
3	29.95	77	70	86	76	67.7	67	ne.	4	3	29.94
4	29.96	77	69.5	86	75	67.7	67	ne.	8-4	4	30.01
5	29.92	75	70	85	74	67.3	66	ne.	4-1	4	29.94
6	29.91	75	69	85	75	66.5	66	ne.	3-1	2	29.97
7	29.93	76	68.5	86	75	66.0	64	ne.	3	3	29.98
8	29.93	76	69.5	85	75	65.3	62	ne.	3	3	29.99
9	29.92	73	69	86	75	66.8	66	ne.	8-0	2-8	29.98
10	29.89	73	69	86	73	68.0	70	ne.	0-2	3-9	29.98
11	29.91	71	68.5	87	72	67.5	70	ne.	0-2	2-0	29.94
12	29.96	71	69	85	71	69.7	77	s-w.	1-0	3-8-0	29.90
13	29.97	78	69	88	71	69.3	73	w-ne.	0-2	5	30.09
14	29.98	76	69	87	77	65.5	61	nne.	3	5	29.97
15	29.98	76	70	88	75	66.0	63	ne.	4	4	30.03
16	29.99	76	68	86	76	66.0	64	ne.	4-2	2	29.95
17	29.99	75	69	85	76	63.3	59	ene.	3	3-5	30.05
18	29.98	78	69	85	75	65.5	64	ne.	3-4	5	30.04
19	30.05	77	69	85	75	65.0	60	ne.	4-5	4	30.06
20	30.00	77	69	86	76	65.7	64	ne.	4-2	4	29.99
21	29.97	75	69.5	85	76	65.5	63	ne.	3	4	30.04
22	29.94	76	68	83	70	66.3	66	ne.	2	5	30.01
23	29.92	74	69	84	72	65.0	63	ne.	3	2	29.98
24	29.89	75	70	84	72	67.7	71	ne.	3	4-2	29.97
25	29.89	76	69.5	83	72	67.7	71	ene.	3	5	29.96
26	29.92	76	70	85	75	67.3	68	ne.	3	3	29.97
27	29.92	75	69.5	86	71	66.9	64	nne.	3	3	29.98
28	29.91	70	68.5	85	75	68.3	74	ne.	2	6	29.97
29	29.90	70	68.5	85	70	68.0	74	ne.	1-0	4	29.96
30	29.89	70	67.5	85	70	68.7	78	s-ne.	4-8	29.96	29.88
Sums.											1.55
Means.	29.941	74.9		85.3	73.7	66.8	67.2		2.6	3.8	29.998
Departure.	-0.016			+0.6	-1.2				-0.2		-0.50

Mean temperature for September, 1900 ($6+2+9\div 3=78.4$; normal is 77.5). Mean pressure for September ($9+3\div 2$ is 29.953; normal is 29.99).

*This pressure is as recorded at 1 p. m., Greenwich time. +These temperatures are observed at 6 a. m., local, or 4:31 p. m., Greenwich time. †These values are the means of ($6+2+9\div 3$). §Beaufort scale.

METEOROLOGICAL OBSERVATIONS AT EAGLE, ALASKA.

Summarized by Prof. ALFRED J. HENRY.

In a previous REVIEW (Vol. XXVII, p. 59) it was stated that the central station of the Alaska climate and crop service would be transferred from Sitka to Eagle, and that Mr. U. G. Myers, a trained observer of the Weather Bureau, would be placed in charge.

Mr. Myers succeeded in opening a station at Eagle, latitude